

REMARKS

The present patent application was filed on July 19, 2006 (claiming priority to International Patent Application PCT/IB2003/005129 filed on November 13, 2003 and published in English with Publication No. WO 2004/056470 A1 on July 8, 2004, under PCT article 21(2),
5 which in turn claims priority from European Application No. 02028555.7, filed on December 20, 2002) with claims 1-23. Claim 23 has been withdrawn in response to a previous restriction requirement. Applicants previously canceled claims 2, 3, 18 and 19 without prejudice. Therefore, claims 1, 4-17 and 20-23 are presently pending in the application. Applicants herein propose to amend claim 1. Support for the amendment to claim 1 can be found, for example, on
10 page 6, lines 28-35, page 14, lines 10-12 and page 17, lines 4-5. No new matter is being introduced.

The Examiner rejected claims 1, 4-7, 9, 10, 14-17 and 20-22 under 35 U.S.C. §102(b) as being anticipated by Church (United States Patent No. 6,432,360) (hereinafter "Church"), rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Richter
15 et al. (Advanced Materials (2000) 12(7): 507-510) (hereinafter "Richter"), rejected claims 11 and 13 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Korlach et al. (United States Publication No. 2003/0044781) (hereinafter "Korlach"), and rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Mian et al. (United States Patent No. 5,686,271) (hereinafter "Mian").

20 The comments of the Examiner in forming the rejections are acknowledged and have been carefully considered.

§102 REJECTION

As highlighted above, the Examiner rejected claims 1, 4-7, 9, 10, 14-17 and 20-22 under 35 U.S.C. §102(b) as being anticipated by Church. Applicants respectfully submit that the amendment to independent claim 1 overcomes the rejection. Applicants assert that Church does not teach or suggest the claimed step of self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer, wherein self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer comprises producing a homogeneous monolayer of molecules on the surface.

On page 6, lines 28-35 of the specification, it is stated that

[t]he amplification reaction... is preferably selective of predefined zones of the surface to prevent unwanted surface coverage. Reaction induced enlargement of the zones is preferably limited to avoid excessive distortion of surface patterning. In particularly preferred embodiments of the present invention, the process is self completing, thus solving the aforementioned problem of variable transfer ratio. (Emphasis added).

Additionally, as stated on page 14, lines 10-12 of the specification, one or more embodiments of the present invention “employ a controllable chemisorption protocol that deters nonspecific adsorption on the surface 1 or on the stamp 2.” Further, as detailed on page 17, lines 4-5 of the specification, one or more embodiments of the invention “permit conservation of templates and patterning of homogeneous areas on the surface.” Church, however, teaches transferring “a heterogeneous pool of nucleic acid molecules” to a support to form a “randomly-patterned” nucleic acid array. (See, Abstract).

Consequently, Applicants assert that Church does not teach or suggest the limitation of self-completing amplification, wherein self-completing amplification comprises producing a homogeneous monolayer of molecules on the surface. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a

single prior art reference.” *Verdegaal Bros. v Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Thus, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. §102(b) rejection of independent claim 1, as well as claims 4-7, 9, 10, 14-17 and 20-22 which are
5 dependent therefrom.

§103 REJECTIONS

As highlighted above, the Examiner rejected claim 8 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Richter. Specifically, the Examiner, on page 5 of the Office
10 Action, stated that “Church teaches the method of claims 1, 4-7, 9, 10, 14-17 and 20-22, as discussed above.”

Applicants respectfully submit that, as detailed above, Church does not teach or suggest every claim limitation of amended independent claim 1. For example, Church does not teach or suggest the limitation of self-completing amplification, wherein self-completing amplification
15 comprises producing a homogeneous monolayer of molecules on the surface. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Furthermore, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)

Consequently, Applicants respectfully request reconsideration and withdrawal of the
20 rejection of claim 8 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Richter.

As highlighted above, the Examiner rejected claims 11 and 13 under 35 U.S.C. §103(a)
25 as being unpatentable over Church in view of Korlach. Specifically, the Examiner, on page 6 of

the Office Action, stated that “Church teaches the method of claims 1, 4-7, 9, 10, 14-17 and 20-22, as discussed above ”

As noted above, Applicants respectfully submit that Church does not teach or suggest every claim limitation of amended independent claim 1. For example, Church does not teach or suggest the limitation of self-completing amplification, wherein self-completing amplification comprises producing a homogeneous monolayer of molecules on the surface. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Furthermore, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Thus, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 11 and 13 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Korlach.

As highlighted above, the Examiner additionally rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Mian. Specifically, the Examiner, on page 7 of the Office Action, stated that “Church teaches the method of claims 1, 4-7, 9, 10, 14-17 and 20-22, as discussed above.”

Applicants respectfully submit that, as detailed above, Church does not teach or suggest every claim limitation of amended independent claim 1. For example, Church does not teach or suggest the limitation of self-completing amplification, wherein self-completing amplification comprises producing a homogeneous monolayer of molecules on the surface. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Furthermore, if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)

Consequently, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 12 under 35 U.S.C. §103(a) as being unpatentable over Church in view of Mian.

5 Therefore, Applicants submit that all of the pending claims, i.e., claims 1, 4-17 and 20-23, are in condition for allowance, and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

10 The Examiner's attention to this matter is greatly appreciated

Respectfully submitted,



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